



inpaws journal

Indiana Native Plant and Wildflower Society

Spring 2015

Define “spring” April in the Midwest

By Hilary Cox

It is just March as I write and the only overt signs of spring are flowers of the non-native plants in my garden, such as crocus, galanthus (snowdrops) and hellebores. Plants which have

evolved in the Midwest know better than to believe the falsehood that spring is here! Much as we humans would like to hurry winter along, there is a set pace by which everything else abides ... and we should, too.

A case in point: some time ago I was in extreme southern Virginia, about half a mile north of North Carolina (Clarksville, VA). They had a real winter that year, and my hosts, Judith and Dick Tyler of Pine Knot Farms, were bemoaning the destruction caused by an ice/snow storm two days previously. Yet the only real damage was to the exotic ornamentals in their garden!

On a stroll through their woods, we encountered *Symplocarpus foetidus* (skunk cabbage) poking through the mud and *Claytonia caroliniana* (spring beauty) and *Houstonia caerulea* (blueets) in flower. These native plants were totally unfazed by the “colder than average” temperatures. (Will someone please tell me who determines these arbitrary numbers that are

supposed to tell us if the weather is doing it right or not?)

For the next three days, I was holed up with another friend in his Virginia mountain home near Charlottesville – a storm that was just rain in Clarksville dropped 7”–10” of snow on us! This friend, too, was bemoaning the damage done to his garden by the white stuff. He knew that under the snow cover all his non-native plants had suffered ice burn. Even his hellebores were beyond rescue this year. Here, just 130 miles north of Pine Knot Farms and at the same elevation,



“It is the easiest thing in the world to pass hepatica without noticing it, so closely does it snuggle among the withered leaves.”
–F. Schuyler Matthews

Inside

Book review	2
Butterflies	13
Conference	10
Hikes	11
Host plant	14, 16
INPAWS in Action	6, 10
Tributes	4-5

there were no natives poking their heads through the ground. They were playing it safe, biding their time, more like at home in central Indiana.

Fast forward to April in the Indiana garden, when we too can expect to see skunk cabbage, spring beauties and blueets, maybe as early as late March. Still, unless you have a woodland garden there is not much happening in the indigenous flower world. The main display is in what would be mid-canopy in a woodland landscape unaltered by man ... redbuds, dogwoods, serviceberries, and in the understory herbs of trillium, hepatica, woodland phlox – the usual April

Spring – continued on page 3

Life in the Soil:

A Guide for Naturalists and Gardeners

Reviewed by Amy Perry

James B. Nardi's book *Life in the Soil: A Guide for Naturalists and Gardeners* (University of Chicago, 2007) is like an educational coffee table book. It invites browsing. It is fun to open it at random and see what pictures and facts that particular section serves up. Scientific but written

for lay people, the book contains fascinating botanical and biological information, an ecological perspective, green gardening methods, tips for backyard naturalists, descriptions of chemical and physical processes, and illustrations on almost every page, including a diagram of the current thinking about phyla and domains.

Nardi is a biologist at the University of Illinois at Urbana-Champaign and the Illinois Natural History Survey. The book, published by University of Chicago Press, lives up to my expectations for a book published by that eminent press. Nardi's clear and engaging writing conveys the science along with a seemingly empathic feel for the creature and its world.

The book features 67 color plates, some of them taken through a microscope. The figures look as if they were drawn with

a very soft fine pencil; they're almost charming enough to appear in a children's book, yet their scientific precision is indubitable (a bar showing scale occurs in every figure).

The book's geographic range includes all five main continents, but concentrates on North American temperate life forms. It mentions or illustrates a few specific Indiana native plants; otherwise it discusses natives by implication, when it describes natural outdoor processes. I wish the book included more examples of Indiana natives, but then the book would not be general enough for its intended audience.

Part One, "Marriage of the Mineral World and the Organic World," presents the soil and its denizens as a complex system and a part of the

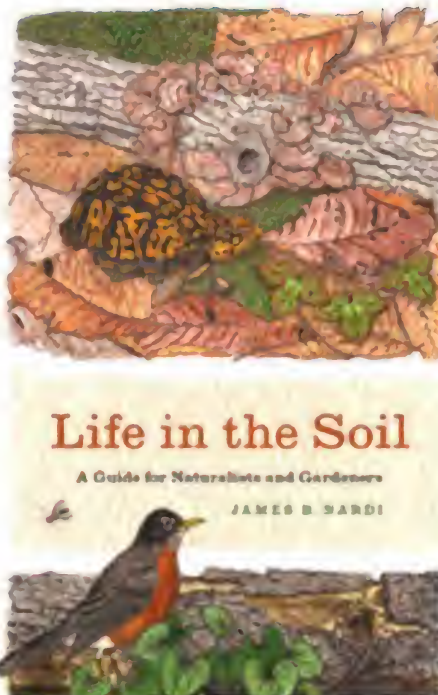
environment in general. For example, Nardi points out that plant and animal decomposition supplies soil with chemical elements that ultimately come from air and water, resulting in the soil's being far richer in nourishment than the air and water we are aware of above-ground.

Natives are definitely implied in Part One's description of the life cycle of soil—its creation from rocks and its enrichment and stabilization by early-succession plants, followed by the role of roots in nitrogen-fixing, in extraction of essential minerals, and in improving the soil. Part One also explains the reasons for many gardening principles and makes them easier to remember. If you've ever wondered exactly *how* clover and legumes fix nitrogen, or why it's good to plant cover crops in a vegetable garden, or why fresh green plant matter is a good addition to a compost pile, here is where you can find out.

The largest part of the book, Part Two, "Members of the Soil Community," describes how 78 types of animals ranging from the microscopic—such as bacteria—to the large—such as woodchucks—interact with soil. In each animal's section a Fact Box gives the common name, classification (phylum, class, order, etc.), place in food web (decomposer or digger, for example), impact on gardens (ally, adversary, or absent), size in metric units, and number of species. Next the author describes individual examples, such as, in the birds section, the woodcock. This bird shuffles around in leaf litter for its dinner. Its eyes are set far back on its head so it can keep a lookout for danger. Its legs are very short so its long bill can easily poke into the detritus and soil. Although the woodcock is still funny-looking to me, I appreciate its suitable design as a litter-poking machine.

Part Three, "Working in Partnership with Creatures of the Soil," discusses how to enrich farm and garden soil. It covers preventing erosion, maintaining soil structure, discouraging invasive species, and composting as an antidote to soil abuse, among other green topics.

An appendix, "Collecting and Observing Life of the Soil," teaches ways naturalists can see for themselves some of the creatures covered in the book. For example, the author tells how to make



Book Review

Book Review – continued on next page

Book Review – from page 2

an emergence box to make soil invertebrates emerge from their leaf-litter or rotting-mushroom habitat. A science teacher or parent of a curious child—or a curious adult!—will find this section helpful. A glossary, index, and list of books for further reading complete the book.

This book is worth its price for the illustrations and fact boxes alone. It describes the stage on which our beloved native flora flourish and interact with fauna, and results in an appreciation of the marvelous, endless complexity of life on Earth.

Amy Perry is a retired editor, recording secretary of INPAWS, and a member of the Central Chapter.

Spring

– from page 1

floral parade in Indiana.

That is why, in my own garden, the April flower show is still predominantly non-native. I do have dogwoods, redbuds and service-berries. I have some of the woodland herb bloomers, too, such as *Anemonella thalictroides* (rue anemone), *Trillium* spp., *Phlox divaricata* (wild sweet William), *Iris cristata* (dwarf crested iris) and, slightly later, *Geranium maculatum* (spotted geranium or cranes-bill). But truthfully speaking, it is early for the Midwestern garden! The soil is typically too wet to work, and temperatures can plunge into single digits (meaning goodbye to forsythia and magnolia blossoms yet again!). And the prairie forbs? They are still biding their time...heads safely tucked underground.

There is a very good reason why native plants bide their time and wait for spring. Pollinators. It was so perfectly timed until the human race came along, except for the occasional natural weather or disease event.

In my long drives across the United States, spring and autumn, I have seen the huge mismatching that occurs due to unprecedented weather patterns. One year my car was plastered bonnet to boot with thousands of dead insects. I felt awful. That was the year the

April storms had all gone Southeast instead of Northeast and had blown the migrating birds off course or stopped them in their tracks completely. By the time they could move North their food supply was lacking. I put two and two together. The following year there were hardly any insects and the birds were suffering diminished food supplies again. And no, it wasn't just because the insects had ended up dead on my car (and thousands of others) the previous year. The natural cycle had been broken.

By now, of course, we are itching to get out into our gardens. Every warm day brings people out of their "cabins" in a fever to escape winter and start a new outdoor season. So what can we do out there in April?

We can tidy up. We can pick up downed branches from winter ice and snow and wind. We can start cutting down any stems left on perennials for "winter interest." We can prune roses, shape up any shrubs that flower later in the year (do not prune spring-flowering shrubs as you will lose this year's flowers), and cut back ornamental grasses (or burn them if you live out in the wilds!). We can plan our future gardens, whether vegetable or ornamental, and then sit on our hands – in my book until the middle of May. Now that, by all criteria, is when spring really starts in the Midwest. And then, what a display! Soon now...

Hilary Cox is a garden designer, freelance writer and photographer.



Sessile trillium may be found in woods in much of Indiana (except the extreme southwestern corner) between March and May.

Tributes

Unsung hero: Judith Houser

Meet Judith Houser, avid gardener and former administrative assistant, who has



been patiently entering INPAWS data manually into our online membership database since May, 2012. From stacks of paper applications, donation letters, conference registrations, and handwritten notes, she has created nice clean records for INPAWS leadership to use. Judy is stepping down from this role but will continue to battle exotic invaders with the Central Chapter Invasives SWAT Team. We salute Judy, a willing and cheerful volunteer. She has been a great help to our organization. 🌱

"Simple gratitude to other species for the nourishment, instruction, companionship and inspiration they have given us should be reason enough to fight for their survival."

Scott Russell Sanders,
A Conservationist Manifesto

Garden Show April 25

Hendricks County Master Gardeners will host their annual "Gardening for All Ages" show April 25, 9 a.m. – 4 p.m., at Hendricks County Fairgrounds, 1900 E. Main Street, Danville. Admission is free and the first 500 visitors will receive a free tree. For details call the Extension Service office, 317-745-9260. 🌱

Marilyn Frohberg (1950 - 2014)

By Ruth Ann Ingraham

Marilyn Frohberg took on the position of treasurer for INPAWS in 2012. But in the middle of her second term and a few days before Christmas, 2014, Marilyn collapsed unexpectedly. She died two days later. With no immediate relatives, her church family, members of the Fifth Church of Christ Scientist, enveloped her with love and prayers during her final hours.

Marilyn was my neighbor, just up the street on Kingsley in Indianapolis. We first met when she strolled past my garden and stopped to admire the plantings. We chatted. It wasn't long before Marilyn invited me to have tea and lunch served on her delicate tearoom style china.

I learned that Marilyn's background was in banking, both in her home state of Illinois and in Indianapolis. So one summer morning over breakfast at her backyard table, with hummingbirds flitting nearby, I asked her to consider serving as treasurer for INPAWS. She agreed and was elected at the 2011 annual meeting. Marilyn gave herself wholeheartedly to INPAWS. She oversaw financial and logistical matters related to our annual plant sale and auction, annual conferences, and Letha's Fund with precision. Through INPAWS she grew to appreciate native plants.

Suzanne Stevens credits Marilyn with saving the day when a technical difficulty caused the loss of all charge records from book sales. Suzanne said, "Marilyn showed up at my door with her sleeves rolled up, and her good humor and perseverance carried us to a positive result with the monies recovered." Last fall they shared their life stories as they drove from Carmel to Bloomington with a truckload of books for sale at the conference. "Memories of that trip were a comfort when I learned Marilyn had passed away," she said. "I know what a good life she had, giving and receiving love."

It is suggested that memorial gifts be made to INPAWS' Letha's Fund, Fifth Church of Christ Scientist, or Second Helpings.

Ruth Ann Ingraham is co-founder, past president, and historian of INPAWS.

News of note

Sophia Anderson (1925 - 2014)

By Betsy Wilson

Longtime INPAWS member Sophia Anderson died December 12, 2014, at the age of 89. She was the unseen support that kept things running and allowed others to flourish. Many will remember her as always at the side of her husband Dan.

Sophie billed herself as the “Stubborn Swede” and knew how to get her way. Once you got to know Sophie, you found a creative, kind person who gave generously of her time and energy to many organizations. Sophie and Dan were on the education committee of INPAWS and contributed plants and labor to the plant sale.

“Sophie billed herself as the ‘Stubborn Swede’ and knew how to get her way.”

Besides caring for her gardens in Indianapolis and Owen County, Sophie helped take care of the herb garden at the Medical Museum and the Watanabe Garden and was an active member of Master Gardeners. Always interested in nature and wanting to pass on her enthusiasm to other generations, she volunteered at the Children’s Museum for over 25 years.

Sophie was born in the upper Midwest and came to Indianapolis to go to school and practice art therapy. She met Dan there and together they raised three children. She was a creative cook and often provided refreshments for organizations she belonged to. She shared her soprano voice with church choirs and several choral groups in Indianapolis. Sophie kept up her love of art by painting flowers and animals. As her painting partner, I will miss my favorite “Stubborn Swede” Sophie Anderson.

Betsy Wilson is a member of INPAWS Central Chapter.

FOR YOUR INFORMATION

- Central Chapter member **Don Gorney** has agreed to assume the duties of INPAWS treasurer after the unexpected death of Marilyn Froberg. A former bank examiner for the Federal Deposit Insurance Corp., he is a board member of Friends of Fort Benjamin Harrison State Park, Earth Day Indiana, and Friends of Cold Spring School, Indianapolis. He is National Audubon Society’s “Important Bird Area” coordinator for Indiana. Don now works as an environmental consultant.
- INPAWS Council has hired **Thomas Higbie**, a retired engineer and database specialist, as administrative support person for membership.
- On Feb. 10, the Council voted to award a \$1,985 **grant** to Keep Indianapolis Beautiful for informational signs for the 2014 native plantings at KIB’s “Greenspace and Native Plant Showcase” at Benedict Inn, Beech Grove.
- President Jeff Pitts is sending a letter to Governor **Mike Pence** regarding the proposed Mounds reservoir. Last year INPAWS Council adopted a resolution opposing the dam project.

Flora of No. America completes mosses

Flora of North America North of Mexico, Volume 28, Bryophyta, Part 2, published by Oxford University Press in September, 2014, completes the Flora of North America Association’s work on mosses. Its 702 pages cover 48 families, 206 genera and 698 species of mosses.

Volumes 27 and 28 present information from the last 50 years of bryological study. Together they describe 1,402 species in 333 genera classified into 81 families. Nearly 20% are endemic to North America; 36 species are globally at risk of extinction.

Richard Zander was lead editor, and more than 40 authors wrote treatments for the book. Patricia Eckel drew the 366 illustrations.



An illustration by Patricia Eckel of Grimmia brittoniae, a rare moss of the interior Pacific Northwest. Eckel illustrated the most recent volume of Flora of North America published in 2014.

Youth outreach: Past efforts, future promise

INPAWS In Action



Through a Letha's Fund grant, youth who participated in Hands of the Future activities at Berlovitz Children's Forest in Lafayette planted shade-tolerant native plants and learned about soil, the role of worms, salamanders, and more. Hands of the Future, a new non-profit based in West Lafayette, provides programs for free through its Junior Nature Club.

By Dawn Slack

In 2014 approximately 760 youth spent much-needed time outdoors connecting with nature with the help of Letha's Fund grants from INPAWS. Since Letha's Fund operates on donations, the youth are direct recipients of not only outdoor experience, but also community love and support. These upcoming decision-makers are our legacy, and Letha's Fund is an essential tool for future conservation management and restoration of our natural areas.

Our accomplishments over the past two years have included updating the Letha's Fund/Youth

Outreach flyer, providing grants for over 2,700 youth to get outdoors, and finalizing the Plant Wizard Patch program.

The committee awarded \$5,441.11 in 2013 and \$5,435.72 in 2014. Since 2008 we have averaged \$4,552.00 in grants annually. In addition, 73 students of Eel River

Elementary School have already been awarded a grant for 2015 to participate in an outdoor habitat project at Cedar Canyon Elementary School in Fort Wayne.

The number of youth served last year was lower than the previous three years so we plan to refocus attention on spreading the word. In addition to reaching more youth in more places, we hope to launch the Plant Wizard Patch this spring. We are actively working with several organizations (Scouts, parks and recreation departments, state parks) to modify and promote the patch program. Lastly, our new flyer is making its way around the state through various organizations; we plan to reach new counties and organizations this year.

We cannot express enough gratitude for the many supporters of Letha's Fund. (See list of donors.) Our appreciation does not stop with monetary supporters but extends to the many INPAWS volunteers and community members who give their time to the program, especially the youth outreach committee members. The

Youth — continued on next page

2014

Letha's Fund Donors

In memory of:

Bill Brink
Christine Carlson
Sam Nieman

Tim Engelland &
Mary Kathryn (Kate) Garrett
George & Christine Plews

Marilyn Frohberg
Amy Perry

Letha Queisser
Michael & Patricia Cracraft
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Carolyn Quessier
Louise Tetrick

Pat & John Stark
Nancy Stark

Mary Lou Thomas
Judith Metzger

In honor of:

Queisser family
David Leibel

Wendy Ford
Jesse Ford

Patch Program
Kelly & Lori Queisser

Thanks to Martin Miller
Sue Arnold

thoughtfulness, compassion, and drive that each of you possesses is truly humbling and inspiring.

We need to spread the news about Letha's Fund. If you are involved with a school, church

youth group, Scouts or other organization, please let them know Letha's Fund can help support trips to a local natural area where they can participate in a salamander stroll, a wildflower walk,

a caterpillar crawl or a leisurely stroll in nature. They can contact the committee at youth@inpaws.org. The grant form and flyer are at lethas-fund@inpaws.org.

Dawn Slack is chairman of INPAWS' youth outreach committee and a member of South Central Chapter.



"In the end, we conserve only what we love. We will love only what we understand. We will understand only what we are taught."

*– Baba Dioum,
Senegalese ecologist*

Donors – continued

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Submissions

All are invited to submit photos, articles, news, and event postings. Acceptance for publication is at the discretion of the editor. INPAWS welcomes differing points of view.

Please submit text and high resolution photos (300 ppi) via e-mail to journal@inpaws.org.

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Spring – Jan. 23 for April 1 mailing
Summer – April 22 for July 1 mailing
Fall – July 22 for Oct. 1 mailing
Winter – Oct. 22 for Jan. 1 mailing

Membership

INPAWS is a not-for-profit 501(c)(3) organization open to the public at inpaws.org.

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Please direct information of interest to webmaster@inpaws.org.

May 9, 2015

Annual Plant Sale & Auction

By **Deb Bonte**

It's that great time of year when spring is coming, we have been thinking about our gardens, and the INPAWS native plant sale is coming up! Imagine a full-size gym bursting with nothing but native plants! Almost too good to be true!

Schedule

Park Tudor High School upper gym
7200 N College, Indianapolis, IN 46220

Friday, May 8

4:00-8:00 p.m. Bring plants to **donate**. We can help unload.

Saturday, May 9

7:00-9:00 a.m. Alternate time to bring plants to **donate**.

9:30-10:00 a.m. **Speaker: M. J. Menely**
Topic: new design ideas using natives in spaces large and small, emphasizing all-season color and biodiversity. M. J. Menely is a landscape architect and owner of Blue Marble Design, LLC. The **\$10 fee** for the talk also gets you 15-minute early entrance to the sale and a \$10 coupon for the auction.

10:15 a.m.-12:30 p.m. **SALE!**

11:15 a.m. **Auction**

Prime, rare, and remaining unsold plants

During the entire sale there will be the bookstore, locally-sourced coffee and goodies, help with carrying purchases to your car, and experts available for questions.

Find more details in the coming months at www.inpaws.org on the blog, under Gatherings/Native Plant Sale, and on the INPAWS Facebook page.

The sale will be held again at Park Tudor High School in Indianapolis. There will be something for every native plant shopper, from novice to expert. Along with excellent plants for sale, there will be a half-hour program at the beginning offering tips for native gardens, a large bookstore with many titles researched by our bookstore manager Suzanne Stevens, and an auction of the finest specimens and rarest plants.

One of our most popular features is the native plant experts who will be roaming the aisles, happy to answer questions on specific growing conditions, design ideas, or what has done well in which conditions. They will also be introducing the plants at the auction, which makes it both a fun and educational experience.

This sale happens because of wonderful volunteers both at the sale and, very importantly, members and friends who

donate plants from their native gardens. If you can help, please volunteer. You can register online at www.VolunteerSpot.com. Simply enter your email address and go to the list of positions available. If you have trouble registering, email me at plantsale@inpaws.org.

If you can donate plants, please begin digging them up a few weeks before the sale, getting them into pots, watching and watering them so they can be somewhat established and at their loveliest by May 9. Please label them if you can—that really speeds things up when we tag and price them. If you need help digging, email our plant rescue team, Jeannine Mattingly and Dee Ann Peine, at plantrescue@inpaws.org.

Deb Bonte is plant sale chair. Tammy Stevens of Keep Indianapolis Beautiful and Jamison Hutchinson of the Indianapolis Mayor's Office Bike Rides are this year's co-chairs.

Save the Date



M.J. Menely will speak on using natives in spaces large and small at INPAWS' largest fundraiser of the year.

November 14, 2015

Annual conference takes shape

By Tom Hohman

The 2015 INPAWS annual conference will be Nov. 14 at IUPUI in Indianapolis. The lineup will include a return of some of our best speakers from past conferences, plus some new ones.

Keynote speakers will be Douglas Tallamy and Rick Darke. Doug Tallamy is well-known from his past speaking engagements in Indiana and his groundbreaking book, *Bringing Nature Home: How Native Plants Sustain Nature in our Gardens*. He has partnered with Darke, noted horticulturist and photographer, to author

The Living Landscape: Designing for Beauty and Biodiversity in the Home Garden. This is a rare opportunity to see both authors together, presenting the complete approach to home gardening.

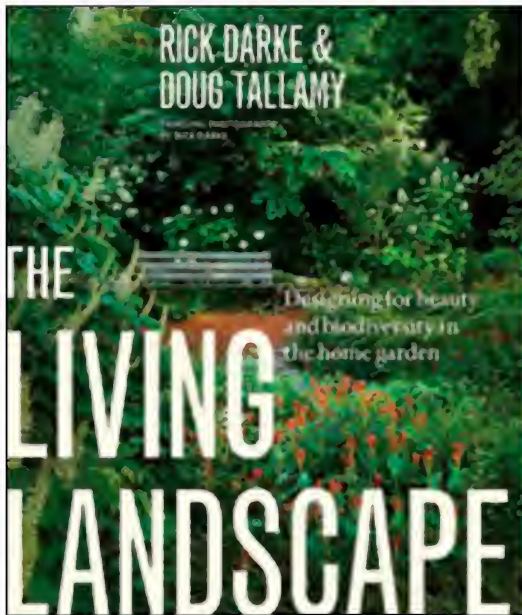
Two more favorites from past conferences will return. Mike Homoya, botanist with Indiana DNR Division of Nature Preserves, is well-known both for his books and his memorable conference presentations. He promises a new angle on his view of our natural world. Jim McCormac, Ohio botanist and

author, will also return to present fresh insights into the natural world. An additional speaker or two will round out the program.

As at the 2014 conference, we plan to have a large contingent of exhibitors, along with the ever-popular book store and other activities to make it an opportunity to immerse ourselves (indoors) in a day of nature.

Tom Hohman is 2015 INPAWS conference chair, a past president, and head of the Central Chapter's invasives SWAT team.

**Save
the Date**



To the Rescue!

By Jeannine Mattingly

Woods, prairie, wetlands, meadow soon to be bulldozed?

If you know of any natural areas scheduled to be destroyed, please email Rescue@inpaws.org. Doing so now will give us time to check out the site, attempt to secure

“...an organized volunteer event that digs and removes native plants from natural areas that are slated to be destroyed.”

permission, and organize a dig for INPAWS members. Plants dug in the spring are great additions to our plant sale and will help fund other INPAWS projects for the year.

As the *INPAWS Cookbook* says: “NATIVE PLANT RESCUE refers to an organized volunteer event that digs and removes native plants from natural areas that are slated to be destroyed. Native plant rescue is a great opportunity to save native plants from destruction, but this activity can also involve risks. The Indiana Native Plant and Wildflower Society's Native Plant Rescue Team has developed protocols to assure that rescues are done in a legal, ethical, and successful way.”

Protocol says that at an organized INPAWS rescue, a member may keep half the plants he or she digs for his/her own use; the other half are to be donated to the annual plant sale. Although it is sad to learn of more land being cleared, this is a way to offset the damage to our native plants.

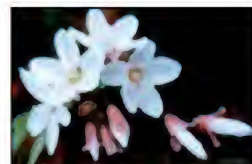
Jeannine Mattingly is co-chair with Dee Ann Peine of INPAWS' plant rescue committee.

Put on your hiking boots!

Indiana DNR Division of Nature Preserves will co-sponsor several hikes in the coming months. The March 1 tree identification hike is from 1 to 3 p.m. All other hikes are from 10 a.m. till 12 noon. All are open to the public, but registration is required at www.in.gov/dnr/naturepreserve.

Date	Preserve	County	Co-sponsor
March 1	Blossom Hollow (tree IDs)	Johnson	
May 2	Big Walnut	Putnam	INPAWS
May 2	Chelsea Flatwoods	Jefferson	TNC
May 16	Wing Haven	Steuben	ACRES
May 16	Moraine	Porter	INPAWS
June 6	Twin Swamps	Posey	INPAWS
June 13	DuPont	Lake	TNC
July 18	Fisher Oak Savanna	Jasper	NICHES
Sept. 5	Eagles Crest	Marion	INPAWS
Sept. 19	Beanblossom Bottoms	Monroe	SLT
Sept. 26	Pine Station	Lake	INPAWS
Oct. 3	Pipewort Pond	Elkhart	INPAWS
Oct. 10	Dustin	Allen	ACRES

ACRES = Acres Land Trust; NICHES = NICHES Land Trust; SLT = Sycamore Land Trust;
TNC = The Nature Conservancy



Lynne Tweedle

Among the early spring ephemerals hikers can look forward to spotting are (from top) spring beauties (*Claytonia virginica*), wild geranium (*Geranium maculatum*), and woodland phlox (*Phlox divaricata*).

“After you have exhausted what there is in business, politics, conviviality, love, and so on – have found that none of these finally satisfy or permanently wear – what remains? Nature remains, to bring out from their torpid recesses the affinities of a man or woman with the open air, the trees, fields, the changes of the seasons – the sun by day and the stars of heaven by night.”

– Walt Whitman

Indiana Parks Alliance Formed

INPAWS founder has 2nd book published

INPAWS founding member Ruth Ann Ingraham charmed readers with her first book, *Swimming with Frogs: Life in the*

Brown County Hills (Indiana University Press, 2005). Now she has turned her attention to a different sort of Indiana story with her book "Cap" Cornish, *Indiana Pilot: Navigating the Century of Flight* (Purdue University Press, 2014).

Clarence "Cap" Cornish grew up in Fort Wayne and began flying at age 19 during World War I. He was a pilot for 78 years. In 1995, Guinness

World Records named him "the world's oldest actively flying pilot."

What attracted a naturalist like Ruth Ann to such a different topic?

"Cap" Cornish was her father. 🌿

Favorite Book?

Do you have a favorite nature book, one that has especially delighted or informed you? One that has shaped your thinking and your actions?

Perhaps it's Rachel Carson's *Silent Spring*, Aldo Leopold's *A Sand County Almanac*, or John Muir's *My First Summer in the Sierra*. It may be something more recent by Doug Tallamy, Scott Russell Sanders, or one of our own talented INPAWS members.

Tell us about your favorite book on nature, gardening, or conservation in 500 words or less. Describe the reasons you love this book, and we will share them with our readers. Deadline for the summer issue of INPAWS Journal is April 22.

Here's the hard part: which book? 🌿

By Tom Hohman

A newly formed, broad-based organization is seeking Hoosier support to help Indiana's state parks and preserves. The Indiana Parks Alliance (IPA) will provide financial support for Indiana state parks and nature preserves and serve as an advocate on issues confronting those properties.

The organization is an outgrowth of shrinking state funding for the Division of State Parks, the Division of Nature Preserves, and the entire Dept. of Natural Resources. Between 2007 and 2013 DNR was required to revert over \$100 million dollars in unspent funds from legislatively



approved budgets. This resulted in deferring maintenance on most of the buildings and structures managed by the two divisions and leaving many positions vacant. As of late January, 13% of state park permanent positions and 18% of nature preserve positions were unfilled.

IPA points out that in 2007 1.4% of the State of Indiana's total expenditures and general fund expenditures were for conservation and environment, mainly DNR and the Department of Environmental Management. In 2015 only 1.0% of total expenditures and 0.6% of general fund expenditures will be for conservation and environment.

While IPA plans to raise private funds to augment state funding, it does not intend to replace diminishing funds for operation and maintenance. Instead, they are encouraging Indiana citizens to let their elected officials know that these natural areas are important to them and need to be supported by state funds. IPA's fund-raising will provide help in scientific research, staff professional development, support of local park friends group efforts, interpretation and education services, and special projects.

Alliance — continued on page 13

Katherine Newkirk



Ruth Ann Ingraham's second book was recently published by Purdue University Press.

Don't miss the first butterfly of the year

By Patricia Happel Cornwell

Who doesn't feel a shiver of delight upon seeing the first butterfly of the spring? Surely it means that spring is really here! Winter is gone. No backsies!

That butterfly is likely to be a Mourning Cloak (*Nymphalis antiopa*). This species is found in most of North America (as well as northern Europe and Asia), but it is easy to miss. At rest with folded wings, its brown-black color bordered in grayish yellow melts into the background of tree bark or underbrush. With a 3" wingspan in flight, it reveals chocolate brown wings bordered in blue dots and a band of rich cream.

The Mourning Cloak lays its eggs in large groups. Its caterpillars, black with red and white spots, red legs and black bristles, feed together on such broadleaf plants as willow, birch, elm, hackberry and cottonwood. Adult butterflies are attracted to fruit, the minerals in mud puddles, and the sap from woodpecker holes.

According to INPAWS member Jeffrey Belth, author of *Butterflies of Indiana: A Field Guide* (Indiana University Press, 2012), "Mourning Cloaks hibernate as adults and occasionally come out on warm winter days, fly around for a while, then go back into hibernation when the temps dip again. Eastern Commas also hibernate as adults and may be seen during winter. So these two species are usually seen in the spring before those that have hibernated as chrysalises or larvae."

Jeff says the first butterflies to appear that have hibernated as chrysalises or larvae are usually Spring Azure, Summer Azure, Cabbage White, Falcate Orangetip, Zebra Swallowtail, Eastern Tiger Swallowtail, Pearl Crescent, Sleepy Duskywing, Juvenal's Duskywing, and Henry's Elfin.

On the first warm day of the year, many of us head out into the woods, eyes glued to the ground in search of the earliest ephemeral wildflowers. Don't forget to also look up – for the first butterflies of the season.

Patricia Happel Cornwell is a Master Naturalist and editor of the INPAWS Journal.



The Mourning Cloak may well be the first butterfly you see in spring. Its underwings (above) are perfectly camouflaged against the bark of trees. When open (below), its wings reveal chocolate brown bordered in blue dots and a creamy gold band.



Jeffrey Belth

Alliance – continued from page 12

Formation of the organization is supported by past DNR directors from both Republican and Democrat administrations. IPA is coordinating with Indiana Natural Resources Foundation and local state park friends groups to avoid competing with or duplicating their efforts.

Donations are tax-deductible. Memberships can include state park annual passes and other gifts. For more information, visit www.indianaparksalliance.org or facebook.com/indianaparksalliance.

Tom Hohman is a past president of INPAWS and president of the new Indiana Parks Alliance.

Sharing berries with birds

By Winnie Mikeska

The first time I tasted a blueberry fresh from the bush was many years ago in the garden of my brother-in-law. His blueberry bushes were lush and tall, so tall that I couldn't reach the top. I still remember the surprising taste. It was heavenly! My sister-in-law had a freezer stocked

with frozen berries from their bushes, and she gave me a quart to take home. Even the frozen berries, after defrosting, tasted wonderful and had a surprisingly firm texture, nothing like frozen blueberries from the grocery.

Years later, when we had our own garden, we planted three blueberry bushes, hoping to re-experience that wonderful taste and texture of truly fresh berries. We bought the bushes from the local farm and garden store. At that time only two commercial varieties were available to us: Bluejay and Bluejay. It was a struggle to get them to grow the first few years, but they did

survive. When they finally started to produce berries, they were a bit disappointing. The berries were nice and firm, but the taste wasn't what I would call delicious. They were just okay. And they were scarce: just a few berries per bush. One bush never did produce.

Fifteen years later, two of the bushes are producing well. One year we had to prop up a couple of branches, they were so heavily laden with berries. But do we get to eat the berries? Oh, no. The birds and squirrels eat them before we get there. Should we cover them with netting to keep out the wildlife? No. We love the wildlife too much. These bushes have become part of our effort to maintain a welcoming environment

for wildlife, particularly birds. They like the berries more than we do.

Several years ago we found a U-Pick farm nearby that grows at least 10 varieties of blueberry and, after picking most of them over the years, I have my favorites. My husband and I go pick them and fill the freezer with enough berries to last from one picking season (June and July) to the next.

Several blueberry species are native to Indiana. Swink and Wilhelm's *Plants of the Chicago Region, Fourth Edition*, 1994, lists *Vaccinium angustifolium*, early lowbush blueberry; *V. corymbosum*, highbush or swamp blueberry; and *V. pallidum*, late lowbush blueberry. *V. angustifolium* and *V. pallidum* are common in the Indiana Dunes.

In the northern fourth of the state, other *Vaccinium* species related to blueberries are *V. macrocarpon*, large cranberry (watch-listed) and *V. oxycoccus*, small cranberry (threatened).

Charles Deam's *Flora of Indiana* maps the counties in which *Vaccinium* species grow. This genus prefers either the northernmost or southernmost part of Indiana. *V. pallidum* grows in both the northwest and southwest thirds of Indiana. (Deam's *V. vacillans* is Swink and Wilhelm's *V. pallidum*.)

Southern blueberry cousins include *V. staminum*, deerberry; *V. staminum* var. *neglectum*, and *V. arboreum*, farkleberry (threatened).

In 2000, Noel Pavlovic of the Lake Michigan Research Station of the US Geological Survey found *V. myrtilloides*, Canada or velvet-leaved blueberry, in the Gaylord Tract of Hoosier Prairie. This species is state-endangered, being found only in the area of Fountain and LaPorte counties.

If you want to purchase native blueberry bushes, they can be hard to find. On the INPAWS web site, www.inpaws.org, you can click on "Landscaping" to find "Sources of Indiana Native Plants," a list by region of retail nurseries and other entities that sell Indiana natives, which may or may not include blueberries. By searching online for specific Latin names of blueberry species, one can find nurseries that offer "natives"; however on closer



About one-third of a bluebird's diet is fruits and berries; the rest is comprised of insects.

inspection, their stock may be cultivars or hybrids rather than the “wild” varieties advertised. *Shrubs and Woody Vines of Indiana* by Weeks and Weeks (Purdue University Press, 2012) lists native plant nurseries in the Midwest.

Blueberry flowers are pollinated mostly by bees, and the caterpillars of butterflies and moths feed on the flowers and developing fruits. The berries are enjoyed by Eastern box turtles, numerous birds from wild turkey to bluebirds, and many mammals. White-tailed deer and rabbits browse on the foliage and twigs. Growing low and dense, lowbush blueberries also provide excellent cover for ground-nesting birds and small mammals.

The bushes we originally planted in our backyard are now exclusively for the birds and squirrels, but occasionally we are able to sneak a ripe berry or two to eat out of hand if we get to them early enough in the morning.

Conversely, we planted a serviceberry bush specifically to provide berries for the birds. When we tasted *those* berries . . . sorry, birds, we like them so much we take as many as we can for ourselves. Not to worry, though. That huge bush provides so many berries, many of them way too high to reach, that we aren't depriving the birds. There is plenty for everyone!

Winnie Mikeska lives in Corydon, where she is an avid bird counter for Cornell Lab of Ornithology. Thanks to Barbara Plampin and Kay Yatskievych for helpful information on native blueberries.

Host with most – from back page

Short- and long-snout acorn weevils feed on the nuts. The female uses her snout to create a tiny hole in the soft young acorn in which she lays her fertilized egg. She then plugs the hole with her frass – a poop plug! The female weevil can do this more than once in each acorn. The eggs hatch and the larvae feed on the nutritious nut meat, high in fat and carbohydrates. In autumn the acorn falls to the ground, and the larvae exit the acorn via a tiny 1/8” hole and burrow into the ground. Here they stay for one to two years before they emerge as adult weevils. The larvae in turn are a lovely protein-packed food for other insects, spiders and small mammals.

Acorn weevils are controlled by, you guessed it, weevil wasps. *Cerceris halone* is an exclusive acorn weevil predator. This 1/2” black and yellow wasp digs a hole and hunts for the weevils. She bites her prey, paralyzing it, and carries it back to her lair where she stuffs it in and lays an egg on it. The larvae hatch to find a fresh meal waiting for them!

The Lepidoptera order includes many species that use oaks as host plants. Hairstreaks are

More than 556 species of insects depend on oak trees.

among the most interesting such butterflies. The Edwards' hairstreak (*Satyrium edwardsii*) in particular has a mutually beneficial relationship with ants.

Older hairstreak larvae secrete “honeydew” (a sugary mixture) from their glands. Ants love this stuff! The ants go to great lengths to secure their honeydew supply. They protect the hairstreak larvae (caterpillars) by leading them to the base of the tree in the morning. Here the ants will have built a conical shaped byre in which the larvae spend the day protected from diurnal (daytime) predators. When evening comes, the ants escort the larvae back up the tree to the leaves, where they stand guard all night while the caterpillars feed on the leaves. The caterpillars get protection and the ants get their honeydew.

An oak tree provides shelter and shade, building materials for nests, and food, and returns up to 400 gallons of water a day into the atmosphere, continuing the water cycle and providing oxygen which is released into the atmosphere.

The *Quercus* genus is truly the host with the most!

Holly Faust is an interpreter for Hamilton County Parks & Recreation at Cool Creek Nature Center and a member of INPAWS Central Chapter.



Mick Talbot via Wikimedia Commons

The acorn weevil (above) depends on the oak for its livelihood. The acorn weevil, in turn, supports the weevil wasp, and both are sources of food for a variety of larger creatures.



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Host plant spotlight

The oak: host with the most!

By Holly Faust

We hear so much about planting native flora and have learned that there are a lot of benefits in planting natives. There are countless fascinating host plant phenomena going on in our environment every day. I have decided to start with trees, specifically the oak family.

There are 18 native oak (*Quercus*) species in Indiana, divided into two groups, red oaks and white oaks. Red oak leaves typically have lobes that end in points. This is due to the leaf veins extending beyond the leaf's edge. The bark is also darker in red oaks. Their acorns take two years to develop; because of this the acorns are high in tannins. This causes them to be less palatable to wildlife (mainly mammals) and to germinate several months later than white oak acorns.

White oak leaves have rounded lobes because the veins do not extend beyond the leaf edges. These acorns develop in one year and are thus sweeter, containing less tannin. They sprout and grow very quickly upon contacting the soil's surface. White oaks are sporadic in their mast (nut) production. Most years production is light and few years produce bumper crops.

Wildlife dependent on acorn crops are bobwhite, quail, crows, acorn woodpecker, wood ducks, mallards, wild turkeys, jays, raccoons, opossums, red and gray foxes, squirrels, rabbits, mice, voles, and deer. These animals gobble up the sweeter white oak acorns in the autumn as they fall, but eat or store red oak acorns as the seasons progress.

Several insect species also compete with these animals for acorns. Over 556 species of insects depend on oak trees, in turn supporting dozens of species of birds, insects and other wildlife. Squirrels sense when an acorn has been invaded by an insect and leave such nuts on the ground. This not only helps the squirrel choose better acorns but it helps insects, specifically the acorn weevil (*Curculio* species).



Wild turkeys are among the many native species nourished by oak trees.

Host with most – continued on page 14